

# **ORCHIDANTHA SARAWAKENSIS SP. NOV. (ZINGIBERALES: LOWIACEAE), A NEW SPECIES ENDEMIC TO EAST MALAYSIA, BORNEO**

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Lowiaceae is one of the eight families in Zingiberales and comprises a single genus, *Orchidantha*. This genus is restricted to South-East Asia and poorly known among Zingiberales. Currently, there are 25 species including a new species from Sarikei, Sarawak, *O. sarawakensis* Syauqina & Meekiong which is described and illustrated in this paper. *Orchidantha sarawakensis* is compared with species described in South-East Asia and also species described in Borneo. The comparison shows that *O. sarawakensis* is closely related to *O. megalantha* Škorničk. & AD Poulsen and *O. holttumii* K Larsen. The features that delineate *O. sarawakensis* as a new species is that its labellum possesses a prominent extended midrib throughout the apex with spiral-like structure, curved upwards and a Y-shaped secretion tissue called viscidium. A key of *Orchidantha* to all Malaysian species is presented.

Keywords: *Orchidantha holttumii*, *O. megalantha*, spiral-like, Sarawak

## **INTRODUCTION**

Lowiaceae (Zingiberales) comprises the single genus *Orchidantha* Brown. The first species (*Orchidantha borneensis*) was described by Brown (1886) from a specimen collected in Borneo (Nagamasu & Sakai 1999). Thereafter, another two species, *O. longiflora* Ridl. and *O. maxillarioides* K. Schum. were described (Keng 1969). All three species were found in Sarawak or Peninsular Malaysia. Several more species were discovered and described in Sarawak, Sabah and Peninsular Malaysia (Larsen 1996, Nagamasu & Sakai 1999, Pedersen 2001, Leong-Škorničková 2014, Syauqina et al. 2016). To date, the total number of *Orchidantha* species only found in Malaysia is 16 (including the present new species).

The genus name *Orchidantha* was proposed by Brown (1886) due to the physical shape of the flower which resembles an orchid flower. The history of the family Lowiaceae was discussed by Syauqina et al. (2016). *Orchidantha* is restricted to South-East Asia with total of 25 species recorded. In Malaysia, the genus is usually found in mixed dipterocarp forest, kerangas forest, and seldom in limestone forest. It prefers a moist habitat, e.g. near streams in shady areas (Carlquist & Schneider 1988).

In the field, sterile *Orchidantha* plants can be easily be mistaken for *Hanguana* Blume, *Tupistra* Ker Gawl. or any other monocot with a robust herb habit (Leong-Škorničková 2014). Since their plant habits do not show any glaring differences, flowers play an important part in distinguishing the species. There are three crucial flower parts in *Orchidantha* that give distinct characteristics to the species, namely, labellum, petal and stigma (Leong-Škorničková 2014). Labellum is the showiest and attractive flower part in *Orchidantha* flower. The size of labellum could be bigger or the same length as the sepals. Every species has a different shape, size and colour of labellum, which are important keys in differentiating the species. The newly described species and two other closely-related species were examined thoroughly by their flower structure and morphology.

## **MATERIALS AND METHODS**

The present new species was collected in Sarikei, Sarawak. It was found in open forest area at 100 m altitude near a stream in Sebangkoi Recreational Park. After evaluating all 15 species of *Orchidantha* known in Malaysia,